COLORADO DISCHARGE PERMIT SYSTEM (CDPS)
FACT SHEET TO MODIFICATION 1
PERMIT NUMBER CO0000004
CH2M HILL ENGINEERS, INC.,
METRO WASTEWATER RECLAMATION DISTRICT NORTHERN TREATMENT PLANT
WELD COUNTY

TABLE OF CONTENTS

I. TYPE OF PERMIT

A. Permit Type: Individual Industrial Permit

B. Discharge To: Surface Water

II. FACILITY INFORMATION

A. SIC Code: 1799 Groundwater Dewatering/Remediation

B. Facility Classification: Class D per Section 100.5.2 of the Water and Wastewater Facility Operator Certification Requirements

C. Facility Location: Latitude: 40.005°N, Longitude: 104.822°W

D. Permitted Feature: 001A: 40°00’30” N, 104°49’24” W
002A: 40°00’15” N, 104°49’25” W
003A: 40°00’04” N, 104°49’33” W

Total flow discharge is set to 4 MGD regardless if multiple outfalls are operated at the same time.

The location(s) provided above will serve as the point(s) of compliance for this permit and are appropriate as they are located after all treatment and prior to discharge to the receiving water.

E. Facility Flows: 4 MGD

III. PURPOSE OF MODIFICATION

This modification is being completed to address items that were included in a modification request received from the permittee. Requested modifications are listed below (note that the Division numbered the items in the table which was provided by the permittee, to better address the changes:

Permit Reference	Permit Language	Description of Modification Requested and Rationale
1) I.A.1 Permitted Feature(s)	Beginning no later than the effective date of this permit and lasting through the expiration date, the permittee is authorized to discharge from, and self monitoring samples taken in accordance with the monitoring requirements shall be obtained from permitted feature(s): 001A, after settling pond: 40°00'30" N, 104°49'24" W 002A, after settling pond: 40°00'15" N, 104°49'25" W 003A, after settling pond: 40°00'04" N, 104°49'33" W **The facility can discharge from any of the outfalls without using settling pond if all the discharge limitations are met without using the settling pond. Total flow discharge is set to 4 MGD when/if multiple outfalls are operated at the same time.**	It is unclear at this point in time whether a pond will be needed for treatment. CH2M HILL intends to construct a pond for flow equalization purposes. The language would obligate CH2M HILL Engineers, Inc. to construct a pond even if it is not needed. Therefore, please strike all references to the settling pond, including in the description of the outfalls and subsequent language. CH2M HILL Engineers, Inc. will incorporate any necessary treatment techniques as warranted based on the results of the quarterly Influent Screening Analysis and the Remediation Activities Management Plan required by the permit. In order to clarify that the 4 MGD flow limit applies to all dewatering discharges from the site (regardless if one or multiple outfalls are in use)suggest modifying the last sentence as follows: **Total flow discharge is set to 4 MGD *for the site, regardless if* ~~when/if~~ multiple outfalls are operated at the same time.**
2) I.A.2 Limitations, Monitoring Frequencies and Sample Types for Effluent Parameters	In order to obtain an indication of the probable compliance or noncompliance with the effluent limitations specified in Part I.A, the permittee shall monitor all effluent parameters at the frequencies and sample types specified below. Such monitoring will begin immediately and last for the life of the permit unless otherwise noted. The results of such monitoring shall be reported on the Discharge Monitoring Report form (See Part I.D.)	During a meeting with the Division, verbal clarification was provided that quarterly monitoring does not begin until the first full calendar quarter of the discharge. It is requested that the permit language be modified as suggested below to clarify the Division's intent. Such monitoring will begin immediately *for parameters with continuous, weekly or monthly reporting requirements. For parameters with quarterly monitoring, this monitoring will begin with the first full quarter of discharge. All effluent monitoring requirements* ~~and~~ last for the life of the permit unless otherwise noted.
3) I.A.2 Limitations, Monitoring Frequencies and Sample Types for Effluent Parameters	Outfall FLOW (Total from 001, 002, 003) table	There appear to be two tables that include flow monitoring requirements. Suggest striking this table (page 3) from the permit and modifying the following table (page 4) for Permitted Feature 001A/002A/003A, to incorporate the flow limitations. Specific changes include: • For 30-day average, change from "Report" to "4" • For frequency, add footnote from Outfall FLOW table, "*Sum of continuously recorded individual outfalls"
4) I.A.2 Limitations, Monitoring Frequencies and Sample Types for Effluent Parameters	Permitted Feature 001A/002A/003A table	1. Please modify the monitoring frequency for Aluminum, Arsenic, Cadmium, Chromium VI, Iron, and Manganese to be decreased from weekly to monthly based on low reasonable potential for these parameters to be present at levels above the limits established in the permit as evidenced by the additional water quality data collected in January 2013 and provided in Attachment 1. 2. Please change all "Composite" sample requirements to "Grab" samples. Once the dewatering operation begins, it is not anticipated that water quality will change significantly over time to warrant a composite sample. In addition, the CDPS General Permit for Remediation Activities Discharging to Surface Water (COG-315000) allows for grab samples for the site-specific limits. (It is our understanding that some permit terms and conditions from this permit were used in drafting Permit No. CO0000004.)

Permit Reference	Permit Language	Description of Modification Requested and Rationale
		3. Suggest modifying the Chromium VI effluent parameter to be dissolved rather than potentially dissolved as the potentially dissolved methodology is not applicable. It requires addition of acid which will change the oxidation state of any hexavalent chromium present. 4. Please remove the Silver effluent limit, as the Reasonable Potential analysis provided in the permit rationale indicated, "A qualitative RP analysis was conducted for this parameter as there was not enough data to conduct a quantitative RP analysis. Sample results for silver were as high as 0.31 ug/L, compared to the effluent limitation of 6.33 ug/L (chronic) and 30.2 ug/L (acute). Therefore, a qualitative determination of no RP has been made and no limitations will be added to the permit." 5. Request that the 30-day average chloride, sulfate and mercury limits be removed based upon the water quality data collected in January 2013 which demonstrates there is not a reasonable potential for their presence in the effluent (in the case of mercury as compared to the revised PEL for mercury, based on the Drs. Lewis and McCutchan Report No. 325, see Attachment 2). The Reasonable Potential analysis listed in the permit rationale indicated that these parameters were included based on a lack of data. 6. For the WET, acute limit, the IWC should be listed. According to the permit rationale, the IWC for this permit is 4%. 7. Please incorporate Selenium and Copper effluent limits based on a recalculation of the approved NTP PELs for these parameters for the 4 MGD flow rate. 8. Please recalculate the Cadmium effluent limit (which was based on the approved NTP PELs) to account for the lower dewatering flow rate of 4 MGD.
5) I.A.3 Monitoring Frequencies and Sample Type Influent Parameters	The permittee must monitor the influent for all listed parameters at the frequency and sample types specified in the table below. Such monitoring shall be conducted after the discharge has commenced, but within the first month of discharge, and shall continue on a quarterly basis. The results of such monitoring must be reported on the Discharge Monitoring Report (DMR) form (See Part I.D). After the review of the influent data, if any concentration increase is noticed for parameters noted in the permit limit table as being dependent on influent screening, then the limits will be effective. If concentrations for other organics are detected then the facility will notify the Division to potentially open the permit to assess the potential water quality impact and add new limitations	A slurry wall is being constructed around the Northern Treatment Plant site as part of the temporary and permanent dewatering strategy for the site. Once the slurry wall is fully constructed and leak tested (which is anticipated to occur within the first six to eight months of construction), there is very little potential to draw off-site contamination onto the site as a result of the dewatering effort. In addition, the Influent Screening Analysis that has been conducted for the NTP site as part of this permitting process has not indicated a potential for any parameters other than Aluminum, Arsenic, Cadmium, Iron (Total Recoverable form) and Manganese. Suggest modifying the language in this section to be consistent with the language found in CDPS General Permit for Remediation Activities Discharging to Surface Water (COG-315000), as provided below. *After the review of the influent data, the Division may require a modification to the permit certification to include additional monitoring requirements and numeric effluent limitations, as established in Part I.A.2. The permittee will be notified if the Division requires any such modification.* *In addition, the permittee must follow the procedures identified in Part I.B.5 if there is a potential exceedance of water quality standards at the permitted outfall, for a parameter not subject to an effluent limit in the permit/permit certification.* *The influent sampling requirement established in Part I.A.3 may be waived on a case-by-case basis if the Division deems the pollutants in the source water have been well characterized or other pertinent information has been provided to the Division.* *If after the submittal of four quarters of influent data substantiating constituents are not detected in concentrations more than one half the surface water standards, the permittee can request relief from the influent monitoring requirements.*
6) I.B.3.a.iv Description of Pollutant Control Practices	The Plan shall describe the installation and implementation specifications for each practice implemented in accordance with Part I.B.3.a.	Suggest modifying the language to modify the permit reference as follows: The Plan shall describe the installation and implementation specifications for each practice implemented in accordance with Part I.B.*2.*~~3.~~a.

Permit Reference	Permit Language	Description of Modification Requested and Rationale
7) I.B.5 Practices for Discharges in Exceedance of Applicable Water Quality Standards	If at any time the permittee becomes aware that at the permitted outfall, pollutant concentrations for an effluent parameter not subject to an effluent limitation in Part I.A exceeds any applicable water quality standard for the receiving water, the permittee shall:	Suggest modifying the language to modify the permit reference as follows: If at any time the permittee becomes aware that at the permitted outfall, pollutant concentrations for an effluent parameter not subject to an effluent limitation in Part I.A.*2* exceeds any applicable water quality standard for the receiving water, the permittee shall:
8) Part III	First table (2 pages): Priority Pollutants And Hazardous Substances Organic Toxic Pollutants In Each Of Four Fractions In Analysis By Gas Chromatography/Mass Spectroscopy (GC/MS) Second table: Other Toxic Pollutants (Metals And Cyanide) And Total Phenols Third table: Toxic Pollutants And Hazardous Substances Required To Be Identified By Existing Dischargers If Expected To Be Present	Section I.A.3 of the permit references the Influent Screening Requirements in Part III, however these requirements are not provided as listed in CDPS General Permit for Remediation Activities Discharging to Surface Water (COG-315000). The influent screening analysis table (as provided in COG-315000) should be added to the permit.

In addition, there are a few items in the permit rationale where modification is requested as noted in the table below.

Rationale Reference	Rationale Language	Description of Modification Requested
III.B. Water Quality Assessment	Note that most of the limitations for the Northern Treatment Facility (at a design capacity of 24 mgd) are being applied in this permit for dewatering, with the exception of iron, aluminum, and benzene, which were developed in the addendum to the PEL, specifically for the design flow to be used in this dewatering/remediation permit (design flow of 4 mgd). The limitations based on the original PEL and the addendum to the PEL and other evaluations conducted as part of this fact sheet can be found in Part I.A of the permit.	The approved PELs for the Northern Treatment Plant are based on a design flow of 28.8 mgd. In addition, it is suggested that the Division notes that in the use of Northern Treatment Plant PELs, the effluent limits are more stringent than needed based on the design flow rate for the dewatering operation.
V.A.4.e Reasonable Potential Analysis	For some parameters, recent effluent data or an appropriate number of data points may not be available, or collected data may be in the wrong form (dissolved vs total) and therefore may not be available for use in conducting an RP analysis. Thus, consistent with Division procedures, monitoring will be required to collect samples to support a RP analysis and subsequent decisions for a numeric limit. A compliance schedule may be added to the permit to require the request of an RP analysis once the appropriate data have been collected.	Based on discussions with the Division, it is our understanding that this provision is not applicable as this is a new discharge permit. Suggest removing this language from the rationale entirely or otherwise noting that this provision is not applicable.

IV. CHANGES TO PERMIT

The changes to the permit made based on the modification request items are listed below:

1) Suggested change has been made to the permit. Same language has been implemented in the fact sheet also.
2) Suggested change has been made to the permit.
3) The Division agrees that there are two tables to require flow monitoring. The Outfall Flow table is included in the permit to regulate the total discharged amount. The Permitted Feature 001A/002A/003A table is report requirements for each outfalls, and is not a total flow requirement. The permittee will have to report individual flows from each outfall. This means that if the permittee will have to complete one DMR for each outfall at each reporting. If there was a discharge from any outfall the facility will have to report the flow for that outfall on its DMR. If no discharge occurred then the facility will report 'no discharge'. Therefore, the flow requirements in the tables were designed for different purposes. For that reason the Division will *not* make any changes to the tables.
4)
    1. The Division agrees with to comment and changed the monitoring frequency to 'Monthly' for Aluminum, Arsenic, Cadmium, Chromium VI, Iron, and Manganese.
    2. The Division agrees with to comment and made the suggested changes.
    3. The Division made the change. It should be noted that the ICIS code provided in the table was already for 'dissolved' form and therefore, no changes made to the ICIS code.
    4. As suggested, silver has been removed from the permit as a no RP has been made in the fact sheet and the parameter has been added to the permit in an error.
    5. Addressed in item 7 below.
    6. The limitation for acute WET testing is at 100% effluent. The IWC calculation is used to determine whether chronic or acute WET testing is applicable for the discharge, and becomes the limit when it is chronic WET testing.
    7. The Division recalculated the permit limitations for copper, mercury and selenium based on the dewatering discharge of 4 MGD. Ambient data were taken from Report 290 which was the basis for original PEL.

Chronic WQBELs

Parameter	***Q_1 (cfs)***	***Q_2 (cfs)***	***Q_3 (cfs)***	***M_1***	***M_3***	***M_2***	***Notes***
Cd, Dis (µg/l)	154	6.2	160.2	0.45	0.68	***6.4***	
Cu, Dis (µg/l)	154	6.2	160.2	4.87	15	***267***	
Hg, Tot (µg/l)	154	6.2	160.2	0	0.01	***0.26***	
Se, Dis (µg/l)	154	6.2	160.2	2.21	4.6	***64***	

Acute WQBELs

Parameter	***Q_1 (cfs)***	***Q_2 (cfs)***	***Q_3 (cfs)***	***M_1***	***M_3***	***M_2***	***Notes***
Cd, Dis (µg/l)	110	6.2	116.2	0.45	4.7	***80***	
Cu, Dis (µg/l)	110	6.2	116.2	4.87	24	***363***	
Se, Dis (µg/l)	110	6.2	116.2	2.21	18.4	***306***	

Potentially Dissolved Cadmium – A qualitative RP analysis was conducted for this parameter as there was not enough data to conduct a quantitative RP analysis. Sample results for cadmium were as high as 0.93 µg/L, compared to the effluent limitation of 6.4 µg/L (chronic) and 80 µg/L (acute). Therefore, a qualitative no RP has been made and therefore, no limitations will be needed.

Potentially Dissolved Copper – A qualitative RP analysis was conducted for Copper as there was

not enough data to conduct a quantitative RP analysis. Sample results for Copper were as high as 20.1 µg/L, compared to the effluent limitation of 267 µg/L (chronic) and 363 µg/L (acute). Therefore, a qualitative determination of no RP has been made and no limitations will be added to the permit.

Total Mercury - The Division will apply the mercury limitation based on the recalculated limits. The limit calculated based on the actual discharge flow is 0.26 µg/L. Sample results for this parameter were 'non-detect' at both 0.005 and 0.1 ug/l detection limits. Based on the data, a qualitative RP would have been result in a 'no RP'. However, a monitoring only will be added to the permit since there are multiple groundwater wells which may have variations in the concentration and therefore a monitoring will be added to the permit.

Potentially Dissolved Selenium- A qualitative RP analysis was conducted for this parameter as there was not enough data to conduct a quantitative RP analysis. Sample results for selenium were as high as 3.8 µg/L, compared to the effluent limitation of 64 µg/L (chronic) and 306 µg/L (acute). Therefore, a qualitative determination of no RP has been made and no limitations will be added to the permit.

Chloride and Sulfate – The Division had a typo in the permit limitations. The permit limitations should have been 637 mg/l (chloride) and 485 mg/l (sulfate) based on PEL No.200322 dated September 9, 2011. Therefore, the Division will use these limitations to address the comment on these parameters. Based on the data submitted to the Division, the chloride and sulfate concentration were ranging between 110 and 160 mg/l for chloride and 159 and 202 mg/l for sulfate, depending on the sampled wells. These ranges show the variability amongst the wells and justify a monitoring for these parameters as in case of mercury.

8. Included in item 7 above.

5) Suggested language has been added to the permit. However, it should be clarified here that exceedance of water quality standards may not require a 'stop discharge' since the limitations for this permit are based on Water Quality Based Effluent Limits and not, water quality standards. The exceedance of the water quality standards, however may trigger permit modification for additional limitations. Part I.B.5 of the permit was also updated to show this information.
6) Suggested language change has been made.
7) Suggested language change has been made.
8) The Division replaced whole section (Part III) with the one from General Permit COG315000.

The additional modification requests on fact sheet have not been implemented since fact sheet is a supporting document to the permit.

V. PUBLIC NOTICE COMMENTS

Kenan Diker
February 5, 2013